

Appl. No. 10/649,410
Amdt. dated August 27, 2004
Reply to Office action of May 27, 2004

Remarks/Arguments:

Reconsideration of the application is requested.

Claims 1-5 remain in the application. Claim 1 has been amended.

In item 2 on page 2 of the Office action, claims 1-2 and 4 have been rejected as being fully anticipated by Evans et al. (U.S. Patent No. 5,219,712) (hereinafter "Evans") under 35 U.S.C. § 102.

The rejection has been noted and the claims have been amended in an effort to even more clearly define the invention of the instant application. The claims are patentable for the reasons set forth below. Support for the changes is found on page 13, line 22, to page 14, line 14 of the specification.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, *inter alia*:

a facilitator provided on the top side of the chip between the top side of the chip and the potting compound or the encapsulation compound,

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the facilitator selected from the group consisting of a material applied thereon and an areal structure formed thereon for defining a variation in a degree of wettability or adhesion characteristics relative to the potting compound or the encapsulation compound for the surface.

The Evans reference does not show a facilitator provided on the top side of the chip between the top side of the chip and the potting compound or the encapsulation compound, the facilitator selected from the group consisting of a material applied thereon and an areal structure formed thereon for defining a variation in a degree of wettability or adhesion characteristics relative to the potting compound or the encapsulation compound for the surface, as recited in claim 1 of the instant application.

Applicants respectfully disagree with the Examiner's comments on page 3 of the Office action, that Evans discloses a facilitator selected from the group consisting of a material (5) applied thereon and an areal structure (66) formed thereon for defining a variation in a degree of wettability or adhesion characteristics relative to the potting compound or the encapsulation compound for the surface.

Evans does not disclose a facilitator in the form of a special material applied to the top surface of the device, or a special surface structure to render the adhesion

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characteristics different in different areas of the surface.

The boundaries (66) in Fig. 15 of Evans, which are considered by the Examiner, are the hardened boundaries at the flanks of the epoxy (62), which is applied from the lateral direction.

It is respectfully noted that Examiner improperly attempts to interpret the combination of resin and radiation as a further material, which renders an areal structure of the surface in the form of boundaries (66). Evans discloses that the intensity of the radiation is such that the uncured epoxy (62) is rapidly hardened creating a boundaries (66) preventing further flow of the uncured epoxy (62) to the gate (58).

Accordingly, the method of Evans modifies the epoxy (62) itself, instead of applying a facilitator for providing different adhesion properties in different areas of the surface. The boundaries (66) in Fig. 15 of Evans are created by the already hardened lateral boundary of the epoxy (62).

Evans discloses that the special structure is produced in the epoxy (62), after it has been deposited on the device surface and the desired result is produced without a preceding modification of the device surface. The boundaries (66) of the partly cured epoxy (62) of Evans are not part of the device surface and it does not cover it. Therefore, Evans does not disclose a facilitator provided on the top side of the chip between the top side of the chip and the potting.

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compound or the encapsulation compound, as recited in claim 1 of the instant application.

Since claim 1 is believed to be allowable over Evans, dependent claim 2 is believed to be allowable over Evans as well.

The following comments pertain to independent claim 4, which has not been amended to overcome the prior art.

Claim 4 calls for, *inter alia*:

processing a surface of the semiconductor chip in a second portion of a top side thereof with at least one process selected from the group consisting of coating with a material and areally structuring to form a configuration thereon rendering wetting, flowing, or adhesion of the potting compound or encapsulation compound more difficult than in a first portion of the top side.

The reference does not show processing a surface of the semiconductor chip in a second portion of a top side thereof with at least one process selected from the group consisting of coating with a material and areally structuring to form a configuration thereon rendering wetting, flowing, or adhesion of the potting compound or encapsulation compound more difficult than in a first portion of the top side, as recited in claim 4 of the instant application. As can be seen from

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the above-given comments, Evans discloses that the epoxy (62) is rapidly hardened by UV radiation, thereby creating a barrier (66) preventing a further flow of the uncured epoxy (62). Evans does not disclose a processing of the surface of the chip. This is contrary to the invention of the instant application as claimed, which recites processing a surface of the semiconductor chip in a second portion of a top side thereof with at least one process selected from the group consisting of coating with a material and areally structuring to form a configuration thereon rendering wetting, flowing, or adhesion of the potting compound or encapsulation compound more difficult than in a first portion of the top side.

It is appreciatively noted from item 4 on page 5 of the Office action, that claim 5 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The claims have not been amended as indicated by the Examiner, as the claims are believed to be patentable in their existing form.

In item 3 on page 4 of the Office action, claim 3 has been rejected as being obvious over Evans (U.S. Patent No. 5,219,712) under 35 U.S.C. § 103. Since claim 1 is believed to be allowable over Evans, dependent claim 3 is believed to be allowable over Evans as well.

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It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1 or 4. Claims 1 and 4 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claims 1 or 4, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-5 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel respectfully requests a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

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Please charge any other fees which might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner & Greenberg P.A., No. 12-1099.

Respectfully submitted,


For Applicant(s)

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